

claims.

I claim

1. A laminate oleophilic reformatory clay, comprising:

a laminate area having a laminate structure; and

a plurality of oleophilic functional groups installed between gaps of

5 laminates, and combined into the laminates by chemical bonds;

wherein a gap distance between the laminates are in a predetermined range for receiving the oleophilic functional groups; and

whereby installation of the oleophilic functional groups in the laminates reforms the clay.

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2. The laminate oleophilic reformatory clay as claimed in claim 1, wherein the predetermined range for the gap distance is from about 2.0 nm to 2.6 nm.

3. A method of production for laminate oleophilic reformatory clay,

15 comprising the steps of :

(1) using a water solution to expand lubricatively laminates of smectite clay;

(2) blending organic alkyl ammonium halogenated salt solution, as the reformatory chemical, with the water solution of smectite clay under agitation

20 for chemical reaction;

(3) after a predetermined period of time of blending under agitation, filtering the water solution to obtain a deposited sediment;

(4) washing the deposited sediment with water then drying the deposited sediment to obtain the oleophilic reformatory clay.

4. The method of production for laminate oleophilic reformatory clay as claimed in claim 3, further comprising, after drying the deposited sediment, grinding the deposited sediment to a particle diameter of 10^{-6} m for practical application.

5. The method of production for laminate oleophilic reformatory clay as claimed in claim 3, wherein the organic alkyl ammonium halogenated salt is $C_{19}H_{42}NBr$ (Hexadecyltrimethyl ammonium bromide).

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6. An ABS nano-metric composite material, comprising:

an amount of ABS substrate; and

the laminate oleophilic reformatory clay as claimed in claim 1;

wherein molecules of the ABS substrate extend into the laminate structure

15 to connect tightly with the laminate oleophilic reformatory clay; and

wherein the laminate oleophilic reformatory clay is applied with a weight ratio of about 3-7% to be contained in the ABS nano-metric composite material.

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7. The ABS nano-metric composite material as claimed in claim 6, wherein the laminate oleophilic reformatory clay is produced by reforming smectite clay with alkyl ammonium halogenated salt.

8. A method of production for ABS nano-metric composite material,

comprising the steps of:

(1) dry blending a predetermined amount of ABS resin and the laminate oleophilic reformatory clay as claimed in claim 1 with a 3-7 weight percentage;

(2) mixing the ABS resin and the laminate oleophilic reformatory clay in a kneading machine under a predetermined shear force to spread the laminate oleophilic reformatory clay uniformly in the ABS resin, a kneading temperature being set in a range of about 180°C to 250°C;

(3) using a cutting tool to produce a plurality of blended pellets, a primary degree of ABS composite material being produced;

(4) kneading the primary degree of ABS composite pellets again for greater uniformity; and

(5) again using the cutting tool to produce a plurality of secondary blended pellets, a final product of ABS nano-metric composite material being produced;

wherein an air extraction device is employed in the first and the second kneading processes to avoid air bubbles in the pellets.

9. The method of production for ABS nano-metric composite material as claimed in claim 8, wherein the kneading temperature is set in a range from about 190°C to 210°C for a better kneading effect.

10. The method of production for ABS nano-metric composite material as claimed in claim 8, wherein the laminate oleophilic reformatory clay is smectite clay reformed with alkyl ammonium halogenated salt.